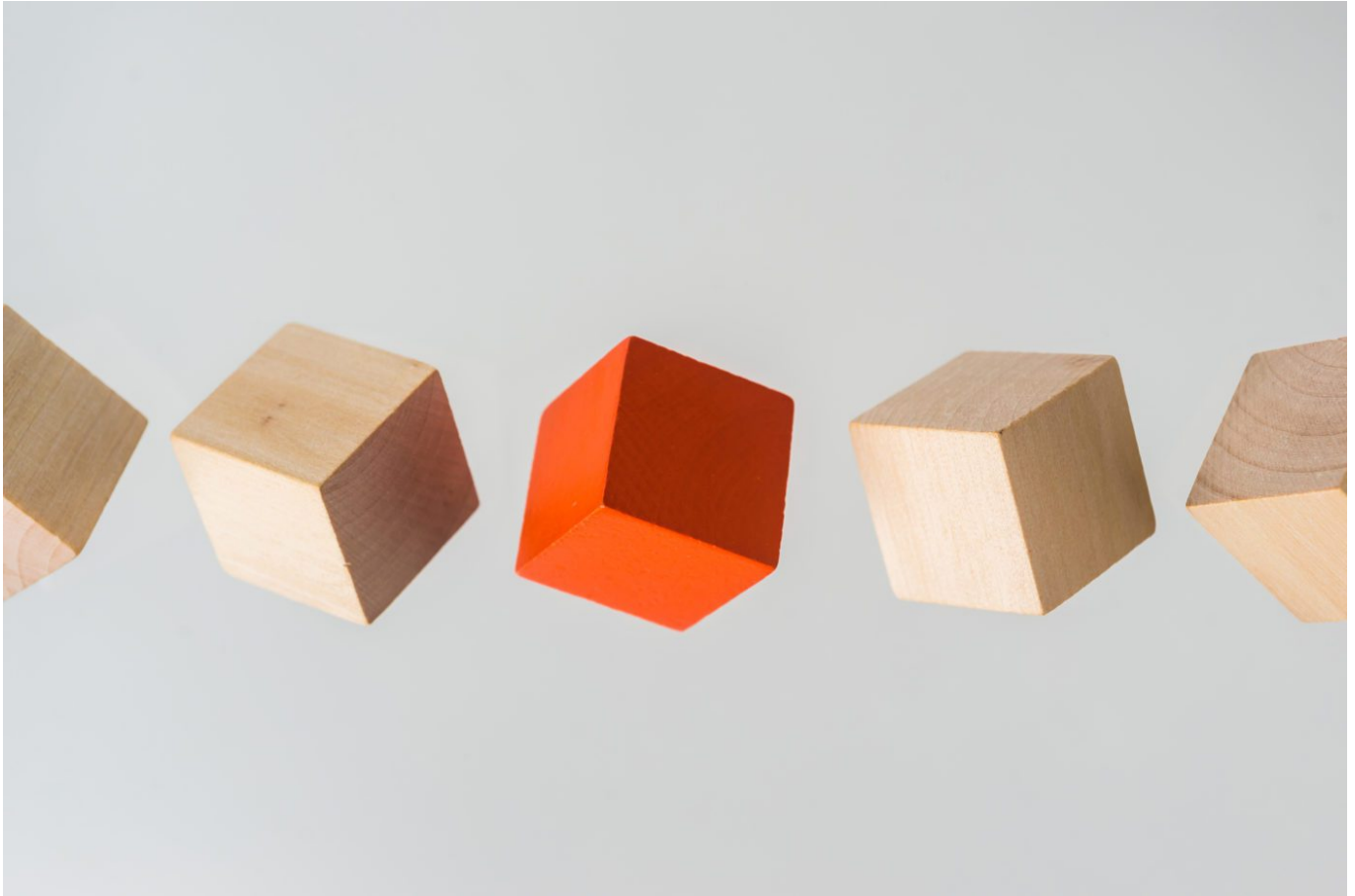


AWS io2 Block Express and Pure Cloud Block Store



[AWS recently announced](#) GA support for their new block storage offering, io2 Block Express. This is exciting news and a great step forward. But what does this have to do with Pure Storage®? And why should Pure users care? Because of [Pure Cloud Block Store™](#).

Pure Cloud Block Store is a software-defined, block storage solution, with industry-leading data efficiency. It runs in the public cloud on AWS and Azure. Pure Cloud Block Store is built for high availability, durability, and data reduction. It's also enterprise feature-rich.

Pure Cloud Block Store leverages the Purity operating environment that's also used in FlashArray™. Purity was built for flash. Data reduction enables the efficient and cost-effective use of flash in FlashArray. Write management keeps flash long-lasting and resilient—for both NVMe-connected TLC in FlashArray//X and NVMe-connected QLC in FlashArray//C.

For Pure Cloud Block Store, Purity works exactly the same way as it does in FlashArray. It uses AWS infrastructure in a way that doesn't abstract or wash out the value of AWS. It builds upon AWS while simplifying the use of it for customers. The Pure engineering team figures out how to make Purity and AWS storage features smart, so you don't need to understand the ins and outs of peculiarities in the underlying storage.

For FlashArray, when a NAND vendor comes out with a newer, better, or different type of flash, we don't assemble a competitive action team. Our engineers spring into action to figure out how we can enhance our product to take advantage of this change so you don't have to figure it out.

We do the same for Pure Cloud Block Store. When a cloud vendor makes changes to its storage offerings, enhances them, or adds completely new choices, our engineering team gets to work figuring out how this change can make Pure Cloud Block Store better. And it's why we love to see new AWS features such as io2 Block Express.

[A recent post](#) by AWS includes the current decision tree for direct use of AWS block storage:

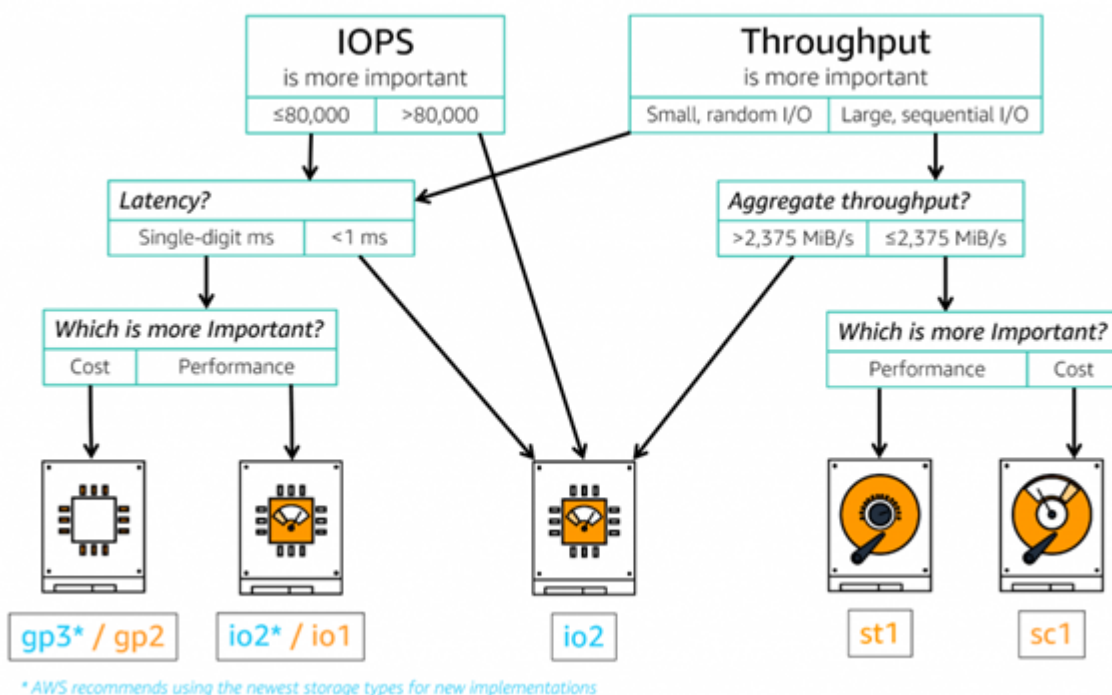


Figure 1: Decision tree for general-purpose storage for Amazon EBS. Source: AWS

Let our engineers do the heavy lifting and figure out what storage to use. And we'll put that into the intelligence of Purity. Sometimes, using every technology available or including every AWS storage option doesn't make sense based on the behaviors of the Purity OS. However, it often does. For instance, Pure Cloud Block Store uses dual-controller design for high-availability access. It also provides software NDU capabilities, io2 for NVRAM (write acceleration and protection), instance store for read caching, and S3 for long-term durability of data.

Previously in Pure Cloud Block Store, we used different node types for the drive nodes. When io2 came out, it made perfect sense to include it. Customers deploying Pure Cloud Block Store may not have even been aware of the change but could automatically receive the benefits of it.

We'll keep innovating the back end of Pure Cloud Block Store so you can take advantage of all of the great enhancements in AWS storage, without having to keep up with them or even be aware of the differences.

When creating a volume on FlashArray or Pure Cloud Block Store, just give us a name and a size, and we'll take it from there.

Create Volume ✕

Pod or Volume Group

Name

Provisioned Size

QoS Configuration (Optional) ▾

When you create a volume on Pure Cloud Block Store on AWS, you're always implicitly fulfilling several other requirements.

Will the volume be:

- **Highly available?**
- **Performant?**
- **Durable?**
- **Encrypted at REST?**
- **Deduplicated and compressed? Will it have pattern and zero removal?**
- **Supported with your instance type?**
- **Able to provide instant snapshot/restore support?**

Flexibility in performance is an important part, too. Each volume isn't limited by a configuration. You also don't have to pay to increase the requirements for one. So if one volume isn't using some IOPS, another one can use them on the fly. Using our QoS, you can draw ceilings in IOPS and/or bandwidth for one volume or as a group.

This is why we call Pure Cloud Block Store the ultimate extension of Evergreen. Pure Evergreen Storage™ subscriptions deliver continuous improvements and innovations to keep your storage modern and agile. It just keeps getting better, without downtime. From acquiring storage to managing and upgrading it, Evergreen subscriptions deliver value and peace of mind.

There are two reasons why we call it the ultimate extension:

- [Pure Cloud Block Store](#) takes the storage technology innovation mindset we offer on-premises with FlashArray and brings it to the cloud. Pure Cloud Block Store and the Purity code within it becomes your on-demand AWS storage consultant.
- Pure as-a-Service™ allows you to purchase a subscription to storage capacity and use it where you need to. That could be on-premises or in the cloud. It also gives you the ability to relocate some or all of the license between the two as your data location changes. Subscribe to capacity

on-premises with FlashArray and move some of that license to Pure Cloud Block Store when you're ready.

This is why storage announcements like this are exciting to us. We get to dig into the choices and figure out how to best use them so you can get the most from Pure and your AWS environment.

